

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRIAN E. GAPCO

Appeal No. 1999-1480
Application No. 08/523,330

ON BRIEF

Before STONER, Chief Administrative Patent Judge, and
FRANKFORT and NASE, Administrative Patent Judges

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 52-70, which are all of the claims remaining in the application. Claims 1-51 have been canceled.

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Appellant's invention relates to a key-holding apparatus having a spheroidal body for enabling easier grasping and turning of a key, particularly by individuals who suffer from arthritis or other debilitating medical conditions that impact digital dexterity. Various forms of attachment and/or clamping structures are disclosed for connecting the spheroidal body to a key. A copy of claims 52-70 on appeal may be found in the Appendix to appellant's brief. Representative claim 52 is set forth below:

52. A key-holding apparatus having a spheroidal body for gripping and applying torque to a key, said apparatus comprising:

a front body portion having a slot formed therein for accepting said key;

a substantially hemispherical rear body portion opposed to said front body portion, said rear body portion providing an engagement surface engageable with an operator's hand; and

a torque transmitting key attachment structure extending along said slot for transmitting torque from said operator's hand to said key via said engagement surface, said key attachment structure comprising a thermoexpansive clamping structure.

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The prior art references of record relied upon by the examiner as evidence of obviousness are:

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|------------------------------|-----------|---------------|
| McRae et al. (McRae) | 4,035,865 | July 19, 1977 |
| Thomas | 4,312,200 | Jan. 26, 1982 |
| Schmalz, Jr. (Schmalz) | 4,768,362 | Sept. 6, 1988 |
| Taylor | 4,910,983 | Mar. 27, 1990 |
| Linsalato et al. (Linsalato) | 5,435,160 | July 25, 1995 |

(filed June 28, 1993)

Claim 66 stands rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. According to the examiner "[t]he specification fails to reasonably convey to one skilled in the art that, at the time the application was filed, Appellant had possession of a key and handle apparatus wherein the key is permanently and thermo-expansively bonded to the handle."

Claims 52 and 55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Taylor.

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Claims 53 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Taylor as applied to claim 52, and further in view of Schmalz.

Claim 56 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Taylor as applied to claim 52, and further in view of Linsalato.

Claims 57-59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Thomas.

Claims 60 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Thomas as applied to claim 57 above, and further in view of Schmalz.

Claim 62 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Thomas as applied to claim 57 above, and further in view of Linsalato.

Claims 63-65, 67 and 70 stand rejected under 35 U.S.C.

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§ 103(a) as being unpatentable over McRae in view of
Linsalato.

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Claims 68 and 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Linsalato as applied to claim 63, and further in view of Schmalz.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the final rejection (Paper No. 26, mailed June 9, 1998) and the examiner's answer (Paper No. 29, mailed December 22, 1998) for the reasoning in support of the rejections, and to appellant's brief (Paper No. 28, mailed October 9, 1998) for the arguments thereagainst.

OPINION

As a preliminary matter, we note that on page 7 of the appeal brief appellant "solicits the independent consideration of the independent claim in each group (Claim 52, Claim 57, Claim 63), and additionally of Claims 65 and 66." Accordingly, we specifically address in our discussions below,

independent claims 52, 57, and 63 and dependent claim 66. In accordance with appellant's desires, claims 52-56 stand or fall together, claims 57-62 stand or fall together, and claims 63-65 and 67-70 stand or fall together, and claim 66 stands or fall on its own. Note, claim 65 stands or falls with claim 63, because appellant did not argue the claim separately.

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims¹, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner.

We turn first to the examiner's rejection of appealed claim 66 under 35 U.S.C. § 112, first paragraph, which rejection we understand to be based upon the written

¹ In regards to claims 55 and 59, line 2, "said handle" has no proper antecedent basis. Upon review of appellant's proposed amendment on page 2 of the appeal brief, appellant proposed to amend claims 55 and 59, line 2, by deleting the word "handle" and substituting --spheroidal body--. As noted by the examiner (answer, page 1), this amendment has not been entered since it was not submitted in a separate paper from the appeal brief. See MPEP § 1207.

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description requirement of the first paragraph of § 112. In general, the test for determining compliance with the written description requirement of § 112 is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language under consideration. Further, it is also well settled that the content of the drawings may be considered in determining compliance with the written description requirement. See Wang Laboratories Inc. v. Toshiba Corp., 993 F.2d 858, 865, 26 USPQ2d 1767, 1774 (Fed. Cir. 1993); Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116-1117 (Fed. Cir. 1991); see also In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

Upon reviewing claim 66, we note that claim 66 requires the key to be "thermoexpansively bonded to said handle." Claim 63, from which claim 66 depends, additionally requires the handle to be "permanently bonded to the end of the key." Therefore, claim 66 requires that the handle be

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"thermoexpansively bonded" and "permanently bonded" to the key.

In this particular instance, after considering appellant's disclosure as a whole, we have determined that appellant fails to describe a bond between a key and the spheroidal handle wherein the handle is "permanently bonded" to the end of a key as required by claims 63 and 66. We construe "permanently bonded" as used in these claims to require a connection between two elements that is intended to last indefinitely without change and which can only be separated by destroying at least a portion of one of the bonded elements. We also understand, from page 5, lines 21-28, of appellant's disclosure, that a "thermoexpansive bond" like that set forth in claim 66 is one which allows "easier insertion of a key when the handle is cooled as in the freezer compartment of a common refrigerator, but... [provides] increased clamping or retention force when the handle assembly is allowed to return to room temperature."

It is clear from the foregoing that a "thermoexpansive

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bond" as described and claimed by appellant is not a "permanent bond" since it is not intended to last indefinitely without change and the key and handle can be easily separated when desired without destroying any portion of either of the components. Thus, we sustain the examiner's rejection of claim 66, under 35 U.S.C.

§ 112, first paragraph, because the thermoexpansive clamping arrangement disclosed by appellant clearly does not provide a "permanent bond" between the key and the spherical handle.

Further, under the provisions of 37 C.F.R. § 1.196(b), we enter the following new ground of rejection against appellant's claims 63-65 and 67-70:

Claims 63-65 and 67-70 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the appellant, at the time the invention was filed, had possession of the claimed invention. Specifically, appellant has failed to disclose a "permanent bond" as set forth in claim 63 and

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therefore required by dependent claims 64, 65 and 67-70, wherein a "permanent bond" is a connection between two elements that is intended to last indefinitely without change and which can only be separated by destroying at least a portion of one of the bonded elements. Further, claim 64 requires that the "key is adhesively bonded to said handle". Adhesively bonded is understood from page 5, lines 16-20, of appellant's disclosure to be, e.g., "double-sided adhesive foam tape". The disclosed adhesive bond is not a "permanent bond". With respect to claim 65, this claim requires the key to be "interference bonded" to said handle. Interference bonded is understood from page 5, lines 29-35 and page 6, lines 1-4 of appellant's disclosure and shown in Figure 1B to be resilient directional or nondirectional ridges, teeth or the like that require significantly higher force and/or deformation of the slot to remove the key. Therefore, an interference bond is also not a "permanent bond".

Next we turn to the rejections under 35 U.S.C. § 103. In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness

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(see In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)), which is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art (see In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). The conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

With this as background, we turn to the examiner's rejections under 35 U.S.C. § 103(a) as being unpatentable over McRae in view of Taylor of independent claim 52 and claims 53-56 dependent therefrom.

We agree with the appellant that all the limitations

recited in independent claim 52 are not met by the combined teachings of the applied prior art (i.e., McRae and Taylor). In particular, it is our opinion that the combined teachings of the applied prior art fail to teach or suggest a key attachment structure comprising a "thermoexpansive clamping structure." In our view the nut and bolt taught by Taylor does not constitute a "thermoexpansive clamping structure" as defined by appellant. The examiner noted that a nut and bolt are commonly made of metal and that when metal is heated it expands; therefore the nut and bolt form a thermoexpansive clamping structure. As we noted above, appellant clearly sets forth, on page 5, lines 21-28, of the instant specification, that "a thermoexpansive material or arrangement of materials may be used in the slot area or for the entire handle, allowing easier insertion of a key when the handle is cooled as in the freezer compartment of a common refrigerator, but providing increased clamping or retention force when the handle assembly is allowed to return to room temperature." Thus, we interpret the thermoexpansive clamping structure of claim 52 as being a structure that exhibits the above characteristics and that relies upon the thermal expansion

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properties of the thermoexpansive material itself to provide a clamping force. While the nut and bolt of Taylor may have some thermoexpansive properties it is clear to us that such a mechanical clamping structure would not be viewed by one of ordinary skill in the art as being a "thermoexpansive clamping structure" like that set forth in claim 52 on appeal for providing a clamping force of the type described by appellant to a key.

In light of the foregoing, we will not sustain the standing § 103 rejection of independent claim 52 and claims 53-56 which depend therefrom.

Next we turn to the rejections of claims 57-62 under 35 U.S.C. § 103 as being unpatentable over McRae in view of Thomas. Looking first to the examiner's rejection of appellant's claims 57-59 based on McRae and Thomas, we note the examiner's position that McRae shows the key holding apparatus substantially as claimed. In this instance what the examiner finds lacking in McRae is a key attachment structure comprising a "resilient directional retention structure." To

make up for this difference between McRae and the claimed subject matter, the examiner observed that Thomas clearly teaches a slotted key holding apparatus provided with a key attachment structure (34e in Figs. 10-12), presumably considered by the examiner to be a resilient directional retention structure. From these teachings, the examiner concludes that for purposes of providing more holding security, one having the ordinary level of skill in the art would have found it obvious to include in the key holding apparatus of McRae, a key attachment structure, as taught by Thomas.

After reviewing the collective teachings of McRae and Thomas, we, like appellant, are of the view that the key attachment structure of Thomas is a symmetric, non-directional detent and not a directional retention structure as required in claim 57 on appeal. As defined in appellant's specification (page 5), the "resilient directional retention structure" is a "series of resilient directional . . . ridges 6, teeth or the like [which] can be inwardly oriented from each wall [of the slot] to allow easy insertion of the key

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base into the slot, yet

provide firm hook-like key retention and require significantly higher forces and or deformation of the slot to remove the key." Like appellant, we are of the opinion that the ribs (34e) of Thomas would exhibit equal forces for insertion and removal of the key member (32) into and out of the holder (34) and accordingly the ribs (34e) are not resilient directional retention structures as required by claim 57 on appeal. Since McRae and Thomas relied upon by the examiner do not disclose a "directional retention structure," it follows that we cannot sustain the examiner's rejection of independent claim 57 and dependent claims 58 and 59 under 35 U.S.C. § 103.

In regards to the examiner's rejections of claims 60-62 under 35 U.S.C. § 103 as being unpatentable over McRae in view of Thomas, Schmalz and Linsalato. We agree with the examiner that McRae and Thomas fail to disclose a series of discontinuities provided on the engagement surface as in claims 60-61 and a truncation in the spheroidal body as in claim 62. We also agree that the above features are clearly taught in the secondary references (Schmalz and Linsalato). We agree with the examiner that it would have been obvious to

one of ordinary skill in the art to provide the base reference (McRae) with a series of discontinuities on the engagement surface and a truncation in the spheroidal body as taught by Schmalz and Linsalato. However, we are compelled to reverse the examiner's rejections of claims 60-62 under 35 U.S.C. § 103 because the teachings of Schmalz and Linsalato do not provide any teaching or suggestion of the "directional retention structure" that we find lacking in the basic combination of McRae and Thomas.

Next we turn to the rejections of claims 63-65 and 67-70 under 35 U.S.C. § 103. Looking first to the examiner's rejection of appellant's independent claim 63 and dependent claims 64-65, 67, and 70 under § 103 based on McRae and Linsalato, we note that the examiner's position is that McRae discloses an implement (30) usable by a person afflicted with arthritis. The implement being formed of a resilient elastic material and comprising a substantially spheroidal handle. What the examiner finds lacking in McRae with regard to the claimed subject matter is that "McRae fails to teach the implement being usable with a key" and also "fails to teach

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the implement being permanently bonded to the end of the key.” To provide for these perceived differences between McRae and the claimed subject matter, the examiner observed that Thomas teaches the use of a double sided adhesive tape (104) to bond a key (16) to a key handle (90). From these teachings, the examiner concludes that for the purposes of comfortably allowing a person with arthritis to use a key to open a lock and for securely holding the key in place, one having the ordinary skill in the art would have found it obvious to permanently bond the key to the holder of McRae, as taught by Thomas.

The examiner has failed to provide a prima facie case of obviousness for the invention as claimed. We agree with the examiner that the combination of McRae and Thomas provides an adhesive bond between the handle and the key, however, it is clear to us that the adhesive tape (104) in Thomas does not provide a “permanent” bond between the handle and the key as is required in claim 63 on appeal.

In view of our interpretation of the terminology

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"permanently bonded" set forth above, we will not sustain the rejections under section 103 of claims 63-65 and 67-70, all of which require a substantially spheroidal handle to be "permanently bonded" to the end of the key opposed to the lock engaging elements thereof.

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CONCLUSION

To summarize, the decision of the examiner to reject claim 66 under 35 U.S.C. § 112, first paragraph, is affirmed. The decision of the examiner to reject claims 52-65 and 67-70 under 35 U.S.C. § 103(a) is reversed. We have additionally presented new grounds of rejection pursuant to 37 C.F.R. § 1.196(b) of claims 63-65 and 67-70 under 35 U.S.C. § 112, first paragraph.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 C.F.R. § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 C.F.R. § 1.197(b) provides:

(b) Appellant may file a single request for

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rehearing within two months from the date of the
original decision

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37 C.F.R. § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 C.F.R. § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 C.F.R. § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

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If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART, 37 C.F.R. § 1.196(b)

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| | BRUCE H. STONER, JR. |) | |
| | Chief Administrative Patent Judge |) | |
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| PATENT | |) | |
| | CHARLES E. FRANKFORT |) | APPEALS |
| AND | |) | |
| | Administrative Patent Judge |) | |
| INTERFERENCES | |) | |
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JEFFREY V. NASE)
Administrative Patent Judge)

CEF/dal

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BRIAN E. GAPCO
1185 TIMBERVIEW Trail
BLOOMFIELD HILLS, MI 48304-1554